LISTING OF CLAIMS:

1. (Currently Amended) A method for the spacerless filling of liquid crystals to form liquid crystal cells on a silicon backplane or microdisplays, said silicon backplane being a semiconductor wafer having said liquid crystal cells formed thereon in a closely spaced array, said method comprising:

forming spacer walls on said silicon backplane to provide a plurality of cells surrounding active liquid crystal display areas;

introducing a curable sealant into gaps externally of said spacer walls so as to fill said gaps with said sealant;

dispensing into each of said active liquid crystal display areas within said spacer walls an exact amount of liquid crystals after introduction of said sealant;

~~introducing a curable sealant into gaps externally of said spacer walls so as to fill said gaps with said sealant;~~

laminating a top layer material to said silicon backplane subsequent to the dispensing of said liquid crystals, said top layer material being laminated with said curable sealant and said dispensed liquid crystals; and

curing said sealant and dicing said silicon backplane through said gaps so as to form individual liquid crystal-filled cells.

Claim 2 (Cancelled).

3. (Previously Presented) A method as claimed in Claim 1, wherein said spacer walls are configured to form essentially rectangular liquid crystal cells.

4. (Original) A method as claimed in Claim 3, wherein said liquid crystal cells each have dimensions within a range of about 4mm x 4mm to 5cm x 5cm in size.

5. (Original) A method as claimed in Claim 1, wherein said top layer material comprises a glass window of a size commensurate with the size of said silicon backplane.

6. (Original) A method as claimed in Claim 1, wherein said spacer walls are formed lithographically on said silicon backplane.

7. (Original) A method as claimed in Claim 1, wherein pressure is selectively applied to said spacer walls during introduction of said sealant into said gaps so as to facilitate control over the uniformity of said gaps about the liquid crystal cells and to provide a support for the silicon backplane during the assembly of said cells.

8. (Original) A method as claimed in Claim 1, wherein each of said spacer walls has a thickness within the range of about 5 to 500 μm.

9. (Original) A method as claimed in Claim 1, wherein the surfaces of said silicon backplane and of said top layer material facing said spacer walls are each provided with a layer of an alignment material.

10. (Original) A method as claimed in Claim 1, wherein the dispensing of said liquid crystals and sealant and lamination are implemented under a vacuum.

11. (Previously Presented) A method as claimed in Claim 1, wherein discrete spacer posts or balls are arranged in the areas between said spacer walls containing said sealant so as to mechanically strengthen said liquid crystal displays.

12. (Currently Amended) An arrangement for the spacerless filling of liquid crystals to form liquid crystal cells on a silicon backplane or microdisplays wherein said silicon backplane comprises a semiconductor wafer having said liquid crystal cells formed thereon in a closely spaced array, said arrangement comprising:

spacer walls being formed on said silicon backplane to provide a plurality of cells surrounding active liquid crystal display areas;

a curable sealant being introduced into gaps formed externally of said spacer walls so as to fill said gaps with said sealant;

precise amounts of liquid crystals being dispensed into each of said enclosed active liquid crystal display areas within enclosing spacer walls subsequent to the introduction of said sealant;

~~a curable sealant being introduced into gaps externally of said spacer walls;~~

a top layer material being laminated to said silicon backplane subsequent to the dispensing of said liquid crystals, said top layer being laminated with said curable sealant and said dispensed liquid crystals; and

said sealant being cured and said silicon backplane being diced through said gaps so as to form individual liquid crystal-filled cells.

Claim 13 (Cancelled).

14. (Previously Presented) An arrangement as claimed in Claim 12, wherein said spacer walls are configured to form essentially rectangular liquid crystal cells.

15. (Original) An arrangement as claimed in Claim 14, wherein said liquid crystal cells each have dimensions within a range of about 4mm x 4mm to 5cm x 5cm in size.

16. (Original) An arrangement as claimed in Claim 12, wherein said top layer material comprises a glass window of a size commensurate with the size of said silicon backplane.

17. (Original) An arrangement as claimed in Claim 12, wherein said spacer walls are formed lithographically on said silicon backplane.

18. (Original) An arrangement as claimed in Claim 12, wherein pressure is selectively applied to said spacer walls during introduction of said sealant into said gaps so as to facilitate control over the uniformity of said gaps about the liquid crystal cells and to provide a support for the silicon backplane during the assembly of said cells.

19. (Original) An arrangement as claimed in Claim 12, wherein each of said spacer walls has a thickness within the range of about 5 to 500 μm.

20. (Original) An arrangement as claimed in Claim 12, wherein the surfaces of said silicon backplane and of said top layer material facing said spacer walls are each provided with a layer of an alignment material.

21. (Original) An arrangement as claimed in Claim 12, wherein the dispensing of said liquid crystals and sealant and lamination are implemented under a vacuum.

22. (Previously Presented) An arrangement as claimed in Claim 12, wherein discrete spacer balls or posts are arranged in the areas between said spacer walls containing said sealant for mechanical strengthening of said liquid crystal displays.